

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



536 846

(43) International Publication Date  
17 June 2004 (17.06.2004)

PCT

(10) International Publication Number  
WO 2004/052019 A1

(51) International Patent Classification<sup>7</sup>: **H04N 7/30**  
(21) International Application Number:  
PCT/IB2003/005420  
(22) International Filing Date:  
24 November 2003 (24.11.2003)  
(25) Filing Language: English  
(26) Publication Language: English  
(30) Priority Data:  
0215292 4 December 2002 (04.12.2002) FR  
(71) Applicant (for all designated States except US): **KONIN-  
KLJKE PHILIPS ELECTRONICS N.V.** [NL/NL];  
Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

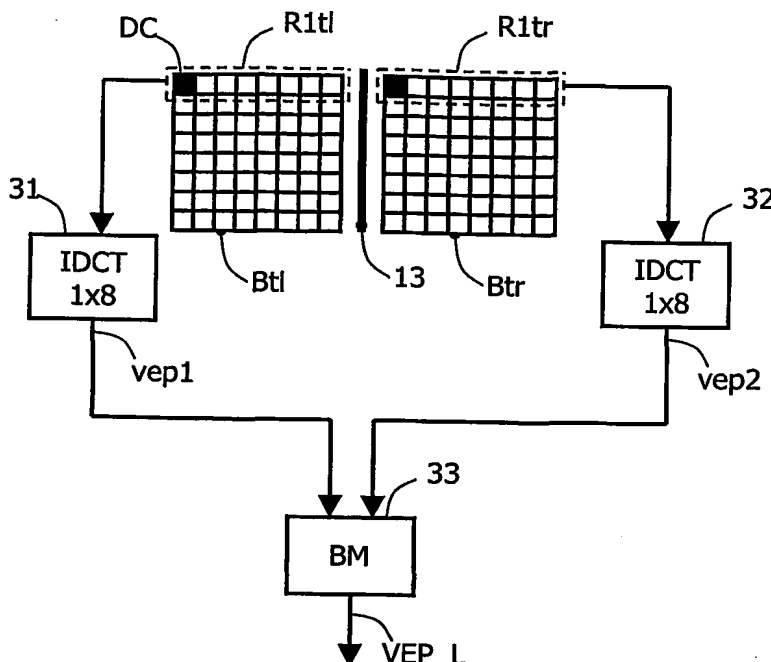
(84) Designated States (*regional*): ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

**Declaration under Rule 4.17:**

— as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ,

[Continued on next page]

(54) Title: METHOD OF MEASURING BLOCKING ARTEFACTS



(57) Abstract: The invention relates to a method of measuring blocking artefacts on the basis of video data encoded in accordance with a block encoding technique. This method comprises a step of computing a monodimensional inverse discrete transform (31) of a first row of a first block of encoded video data, suitable for supplying a value of a first virtual border pixel (vep1). It also comprises a step of computing a monodimensional inverse discrete transform (32) of a first row of a second block of encoded video data, the second block being adjacent to the first block, suitable for supplying a value of a second virtual border pixel (vep2). Finally, the method comprises a step of computing (33) a blocking artefact level (VEP-L) on the basis of an absolute value of the difference between the values of the first and second virtual pixels. This method finds its application, for example, in video encoders, decoders and transcoders.